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## Incorporating Environmental Arrangement Strategies into Classroom Activities

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INCORPORATING ENVIRONMENTAL ARRANGEMENT STRATEGIES INTO  
CLASSROOM ACTIVITIES

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THESIS

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A thesis submitted in partial fulfillment of the  
requirements for the degree of Master of Science in Education in the  
College of Education  
at the University of Kentucky

By

Brandy M. Denton

Lexington, Kentucky

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and Dr. Justin D. Lane, Associate Professor of Special Education

Lexington, Kentucky

2020

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## ABSTRACT OF THESIS

### INCORPORATING ENVIRONMENTAL ARRANGEMENT STRATEGIES INTO CLASSROOM ACTIVITIES

Individuals with extensive support needs, including those who have autism spectrum disorder and are classified as level 3 in the area of social communication, are more likely than same-age peers to display delays in age-appropriate social communication and engagement in activities. To address these issues, special education teachers, in collaboration with related-service providers, should create social communication and engagement objectives. Once objectives are identified, teachers can plan for and implement environmental arrangement (EA) strategies to promote these behaviors in a natural context. EA strategies are a long-standing approach to creating a communication-rich environment and can be used alone or paired with systematic teaching strategies. In addition, embedding opportunities for social communication and engagement within and across activities can be challenging and, as such, requires careful planning. Teachers can use a communication matrix to create a plan for addressing these social communication objectives throughout the school day.

**KEYWORDS:** Communication, Classroom, Environmental Arrangement, Special Education, Autism Spectrum Disorder, Complex Communication Needs

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11/11/2020

Date

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## CHAPTER 1. INCORPORATING ENVIRONMENTAL ARRANGEMENT STRATEGIES INTO CLASSROOM ACTIVITIES

### 1.1 Overview

My thesis consisted of two components. The first component was a practitioner-based paper about environmental arrangement strategies and teaching social communication in the classroom with students who have complex communication needs. The second component was an online training module that is available for teachers that. The paper will be presented first, followed by a description of the online module.

### 1.2 Component 1: Thesis Practitioner Paper: Incorporating Environmental Arrangement Strategies Into Classroom Activities

*Mr. Rivera is an elementary special education teacher who teaches students with autism spectrum disorder (ASD) in a self-contained classroom. All of his students are individuals with extensive support needs and complex communication needs. Each student displays delays in social communication during typical activities, leading to decreases in meaningful interactions and engagement. Mr. Rivera is concerned he is not providing enough opportunities and planning for his students to engage in social communication during instruction. He decided to attend a professional development workshop on increasing communication opportunities in the classroom, where he learned about environmental arrangement (EA) strategies; he decides to apply these practices in his classroom.*

Individuals with extensive support needs and may display difficulties meaningfully sharing wants, interests, and feelings with their families, peers, and other adults. Although students with extensive support needs may be less likely to reliably use

speech to communicate (i.e., use no words, few words, short phrases), this is not necessarily indicative of lack of communicative intent (Paul & Norbury, 2012). For example, children with ASD are likely to request, engaging in such behaviors by guiding another person to a desired item or vocalizing in reference to a preferred item (Bottema-Beutel et al., 2014). In addition, most individuals communicate using a variety of modalities (e.g., pointing, reaching, facial expressions). Relatedly, according to Downing et al. (2015), all people can and do desire to communicate in some way, regardless of the impact of their disability. It is important that teachers and related-service providers assume that each individual has the desire to communicate and, as such, facilitate the development of communication in students with whom they work.

Individuals with extensive support needs and ASD will likely require supports to recognize when and how to communicate wants, interests, and feelings (Lane, Lieberman-Betz, et al., 2016; Lane, Shepley., 2016). Without a reliable mode of communication, individuals with extensive support needs and ASD may display problem behaviors. Problem behaviors typically serve a communicative function for students with extensive support needs and ASD. There are a variety of functions for communication that include, but are not limited to requesting, gaining attention, rejecting, commenting, giving information, seeking information, expressing feelings, and making choices. Students may also engage in problem behavior as a mode of communication, but by being taught appropriate conventional communication behaviors, those problem behaviors will decrease. Promoting social communication and engagement are important domains and desired outcomes of teaching. When students learn how to communicate

while engaging in typical activities, regardless of their disability, they are able to meaningfully participate and learn from others.

#### 1.2.1 Environmental Arrangement Strategies Defined

Special education teachers are tasked with targeting a variety of skills with their students, including social communication. With practice and support, teachers can learn to arrange the environment across the day to provide increased opportunities for students to communicate and to teach communication skills, while also targeting academic, vocational, and social behaviors. EA strategies involve modifying the environment by strategically placing and organizing classroom materials, furniture, and activities that result in opportunities to use social communication. EA strategies are used to implement successful behavior change programs and lessons by embedding opportunities for students to learn when and how to engage in desired behaviors (Ledford et al., 2019).

EA strategies decrease the likelihood that problem behavior will occur because the teacher is providing an opportunity for communication. EA strategies increase the frequency of social communication engagement, as well as social interactions with peers and adults. Prior to instruction, teachers should plan ahead of time to strategically use EA strategies in lessons to increase the likelihood that a student will communicate spontaneously and to provide teaching opportunities (Zimmerman & Ledford, 2016). EA strategies are sometimes used in naturalistic language interventions (NLI) as part of an intervention package (e.g., enhanced milieu teaching, [EMT] and pivotal response training). NLIs are interventions that occur naturally in a child's environment throughout the day that focus on developing communication and social skills.

There are a variety of EA strategies that teachers can use. EA strategies include, but are not limited to the following: (a) offering preferred materials during typical activities, (b) presenting materials in a manner in which they are in view but out of reach, (c) presenting materials that the child needs help to access, (d) providing inadequate amounts of materials, (d) sabotaging the environment, (e) blocking access to materials, and (g) engaging in unexpected situations with materials, and (f) providing opportunity for child to reject a non-preferred action or material (Lane & Brown, 2016). The teacher can use EA strategies to target different areas of social communication and engagement such as requesting, commenting, protesting, increasing vocabulary usage, and increasing mean length utterance. The purpose of this paper is to describe when and how to use environmental strategies to evoke social communication and engagement in the context of the classroom, as one strategy for teachers to use in creating a communication-rich environment.

*Ms. Brown teaches students with moderate to severe disabilities. Her students also have complex communication needs, similar to Mr. Rivera's students. Although Mr. Rivera is an elementary school teacher and Ms. Brown is a high school teacher, they are both able to use EA strategies to increase opportunities for their students to engage in activities Ms. Brown and Mr. Rivera's thought processes are similar when planning for EA strategies, but because of the differing ages and learning targets of their students, the classroom examples vary. Use of these strategies helps create opportunities for students to communicate across a variety of communicative functions. The teacher should identify social communication targets that the student needs to learn or increase and monitor the occurrence of the behavior.*

Table 1 provides descriptions of the EA strategies and provides examples for using strategies within the context of elementary and secondary classroom settings.

Table 1: Environmental Arrangement Strategies: Purpose/Use, and Examples

EA Strategy	Defined	Purpose(s)	Classroom Example
In View, Out of Reach	Put preferred items within sight of the student, but out of reach so that the student cannot access independently	Encourages social communication for highly motivating items or materials; increases in opportunities for a student to request items	<p><i>Elementary:</i> One of Mr. Rivera's students' favorite toy in the classroom is a floor puzzle that has his favorite character on it. Mr. Rivera places the puzzle on a bookshelf where the student is can see it. When the student reaches for the puzzle, takes the opportunity to wait for the targeted communication response (2 word verbal request) and prompt it if needed. As the student develops more language, Mr. Rivera will change the requirement of the communicative act for the student to gain access to the toy.</p> <p><i>Secondary:</i> Ms. Brown's students have been creating landscapes that they are learning about. One of her students loves the activities each day, so Ms. Brown placed materials in a cabinet where the student knew the materials were located. Ms. Brown provided an opportunity for the student to request the items rather than having them ready for him.</p>
Provide inadequate portions	Provide only a portion of the item or activity to the student	Aids in increasing requests from students	<p><i>Elementary:</i> Mr. Rivera has a student that loves to do wooden puzzles. Mr. Rivera provides the puzzle to the student, but withholds two of the pieces. The student will need to request the missing pieces before he is able to finish the puzzle.</p> <p><i>Secondary:</i> Ms. Brown and the speech therapist conduct a small group cooking lesson on how to make cookie dough. During the lesson, Ms. Brown does not provide enough chocolate chips that are required to follow the recipe. The student has to request more chocolate chips.</p>

Table 1 (continued).

Gatekeeper	Block access to an activity	Encourages students to request an activity or items	<p><i>Elementary:</i> Mr. Rivera's class walks to the playground for recess after lunch. Mr. Rivera blocks access to the gate that allows the students to enter the playground area. Mr. Rivera's students will need to make a request for Mr. Rivera to open the gate or move so that they are able to play.</p> <p><i>Secondary:</i> Ms. Brown is conducting a math lesson on multiplication. She is using manipulatives to count groups. Ms. Brown blocks access to the container of manipulatives. The students will need to request more or ask for the container.</p>
Choice Making	Provide choices with opportunities to respond	Aids in students making a request for preferred items or activities	<p><i>Elementary:</i> Mr. Rivera's class has snack in the classroom daily. Mr. Rivera presents 2 options to the students. The students have the opportunity to make a choice of what they want for snack each day.</p> <p><i>Secondary:</i> Ms. Brown is scheduling elective classes for her students. She gives them a choice between electives, which allows them to choose what classes they want to attend. Ms. Brown also provides the student an opportunity to choose who he or she would like to accompany him or her to class.</p>
Assistance Needed	Provide items that require assistance	Increases opportunities for students to request help	<p><i>Elementary:</i> Mr. Rivera's student is working on activating a switch to turn on a toy. The student requires assistance to activate the switch. Before helping the student, Mr. Rivera provides an opportunity for the student to request assistance (e.g., using a core vocabulary board to say "help").</p> <p><i>Secondary:</i> Ms. Brown provides a book to a student that will require assistance to read. The student will need to request help from a teacher or peer to read the book.</p>

Table 1 (continued).

Unwanted object/activity	Present an item or activity that the student does not want	Teaches students to protest in appropriate ways	<p><i>Elementary:</i> Mr. Rivera presents a game that a student has continuously shown he does not like. The student will run away from the group when the game is presented. Mr. Rivera uses this opportunity to teach an appropriate way to protest by providing the student with a picture of “I don’t want.”</p> <p><i>Secondary:</i> Ms. Brown has a 15 minute free-choice time daily. One of her students has become upset by crying loudly when another student chooses to play the piano. Ms. Brown teaches the student to say “I don’t like that” using his AAC device and then request a walk to escape the classroom during that time.</p>
Sabotage	Make a task impossible to complete	Aids in increasing requests and comments from students	<p><i>Elementary:</i> Mr. Rivera’s class is working on a holiday craft. When setting up for the lesson, Mr. Rivera ensures that the glue sticks he provides are dried out and will not work. The student will have to make a request or comment to gain access to a glue stick that works.</p> <p><i>Secondary:</i> Ms. Brown’s class collects and sorts all of the recycling materials for the school in the gymnasium. They always need containers labeled with “paper,” “cardboard,” and “plastic” to complete their assigned tasks. Ms. Brown purposely leaves the “plastics” container in her classroom. The students will need to request the container or make a comment to her in order to complete their recycling duties.</p>

### 1.2.2 Why Use Environmental Arrangement Strategies in the Classroom

*Mr. Rivera conducts small group instruction for reading daily with the same three students in his class. Every day, while the students are engaged in a movement break, Mr. Rivera prepares for the lesson by placing all student materials on the table where the students sit for reading group. He ensures each student has his or her reading folder,*

*pencil with eraser, highlighter, adapted book, and individualized worksheets. He also has tangible reinforcers readily available for one student that earns “tokens” throughout the lesson to earn a tangible reward. He realized that by placing all of the items in reach and preparing all of their materials for them, he was eliminating many opportunities for communication.*

**Figure 1.** Students are ready for a reading lesson with Mr. Rivera.



The focus of using EA strategies is for the student to increase his or her use of targeted communication skills. Teachers may unintentionally prevent communication attempts by allowing all materials to be available and have no expectation for communication. In addition, teachers may not wait for children to communicate or may provide too many prompts, increasing the likelihood that students do not respond unless prompted (Ledford et al., 2019). As seen in Figure 1, Mr. Rivera is preparing for a lesson and has placed all necessary student materials on the table inadvertently eliminating the communication opportunities that come with gathering materials for a lesson such as requesting and commenting. By implementing EA strategies, teachers are setting the occasion and providing an opportunity for their students to engage and communicate. EA strategies may be used to teach several different communication goals, including increasing duration of engagement, increasing rate of communication, producing more



diverse words or phrases, using new vocabulary words, increasing mean length of utterance, increasing communication initiations, and using new functions of communication such as rejecting, requesting, and commenting.

### 1.2.3 Planning a Language-Rich Classroom

Before a teacher can plan for EA strategies, the classroom teacher must know their students' communication levels, both strengths and challenges. It is important that the student's mode of communication to be established before using EA strategies. The student may have several modes of communication that should be accepted. First, the teacher should work with the speech language pathologist to establish the communication targets and write the communication objectives. The team works together to write communication objectives. Communication objectives should always include the following: (a) assistive technology (AT) or augmentative and alternative communication (AAC) or state that the student uses oral speech, (b) the activities or routines, (c) a behavior that allows for generalization, and (d) including use with multiple communication partners. Objectives should include the following: conditions, student's name, behavior, and criterion. When writing the conditions, the teacher is stating in what activities and routines that the behavior will be performed. The conditions also explain how the skill will be performed (e.g., mode of communication, assistive technology), with whom the student will perform the skill, and any accommodations or modifications will be necessary. The student's name should be stated in the goal because objectives should be individualized. The desired behavior should be stated in observable and measurable terms and consider multiple modes of communication. The criterion should describe how much, how well, and for how long the behavior should occur. When writing

communication objectives, teachers and speech therapists should consider that communication occurs throughout a child’s day, rather than writing the target so that data will be collected in a discrete or massed trial session (M. J. Ault, personal communication, January 26, 2020). Table 2 includes sample communication objectives for both elementary and secondary classrooms.

*Kamari is a student in Mr. Rivera’s classroom. Making choices has been challenging for Kamari. He has required full physical guidance to make a choice when presented with 2 or more options.*

**Table 2: Examples of Communication Targets**

<p><i>Elementary</i></p> <p>Mr. Rivera’s student, Kamari, has had difficulty making choices without hand over hand support.</p>	<p>When involved in an activity (described below) and given choices between two objects (graphic symbols with words), Kamari will choose an item by looking at or touching the desired object for 3 s across three activities for 3 consecutive days.</p> <p><i>Activities will include:</i> meals, free time, snacks, reading, math, special area peers.</p>
<p><i>Secondary</i></p> <p>Ms. Brown’s student, Rosie, has had challenges with rejecting items or materials that she does not like in an appropriate manner. She will cry, push her peers, or push the items away rather than using her AAC device.</p>	<p>During non-instructional activities (described below), Rosie will indicate that she does not like something in her environment (e.g., item, activity, sensory stimulus) by using her AAC device (described below) or verbalization (described below) rather than eloping, crying, pushing peers or staff, or pushing away items or activities across 3 activities for 3 consecutive days.</p> <p><i>Activities will include:</i> breakfast, lunch, snack time, breaks, and any other non-instructional times.</p> <p><i>AAC Device:</i> printed core communication board in color with each word containing a graphic symbol and a word. Core board consists of 66 core vocabulary words. When using her AAC device for this target, the following will be accepted: touching the words “I” “not” “want”, STOP (sign or verbalization).</p>

#### 1.2.4 Planning for EA Strategies

*Mr. Rivera's student, Kamari, has the following identified communication targets: making choices, requesting materials and peers, and rejecting when something he does not like something. Mr. Rivera completed a communication matrix in collaboration with other related service providers to increase communication opportunities in these areas across activities that occur during the school day.*

Once teachers establish specific communication objectives, teachers can use a communication matrix to plan specifically for EA strategies. Examples of a completed communication matrix for Kamari are shown in Table 3. During the planning process, best practice is to use interprofessional collaboration. The student's team should work together to select appropriate targets and plan for EA strategies by providing input from each person on the team. Each person on the student's team should provide knowledge in his or her area of expertise. Interprofessional collaboration will result in the best planning and implementation of EA strategies for the student.

When teachers begin planning to implement EA strategies in activities throughout the school day, teachers can use a communication matrix to help plan when and how communication targets will be taught and what EA strategies to use. The communication matrix also can be used to help caregivers plan to teach learning targets at home. A communication matrix allows teachers to input their daily classroom schedule and plan for specific teaching opportunities based on a student's learning objectives. Table 3 provides an example of a communication matrix that Mr. Rivera used to plan for activities with Kamari in his elementary self-contained classroom. The school speech

language pathologist collaborated with Mr. Rivera during this process. The speech language pathologist and teacher use a communication matrix to list the communication targets horizontally across the top of the matrix and then they put the classroom schedule in the left-hand column of the matrix. Then each cell of the table is completed to provide specific teaching opportunities for the student to engage in communication. The number of targets and classroom schedule can be modified to meet the individual needs of the student. A blank copy of a communication matrix can be found in Appendix A.

*Table 3: Communication Matrix Example for Kamari*

Schedule of classroom curriculum activities	Student's communication targets (academic, social, etc.)		
	Request Device/System and EA	Make Choice Device/System and EA	Reject Device/System and EA
Morning Meeting	Kamari requests the peer he wishes to sit next to: "I want Bobby"; Bobby is taught how to prompt and reinforce Kamari (single switch) <i>EA: directly train peers</i>		"No, I don't like" when a peer is singing loudly (single switch) <i>EA: sabotage the environment</i>
Math	Give opportunities for Kamari to choose manipulatives, pencils, etc. (graphic symbols + words) <i>EA: Choice making</i>		
Lunch	Use visual menu to allow Kamari to make choices for lunch items (SuperTalker 2 cell – with graphic symbols + words) <i>EA: Choice making and visual supports</i>		"No, I don't want" when presented with food items (single switch) <i>EA: unwanted activity</i>
Specials	"I need red crayon/marker" (two switch choice switch with graphic symbols) <i>EA: provide choices, carefully select materials</i>		

Once the teacher has completed the communication matrix with other related service providers, they will use it to implement EA strategies throughout the school day in natural routines. The teacher will use the communication matrix to plan for the use of EAs in activities that occur throughout the school day.

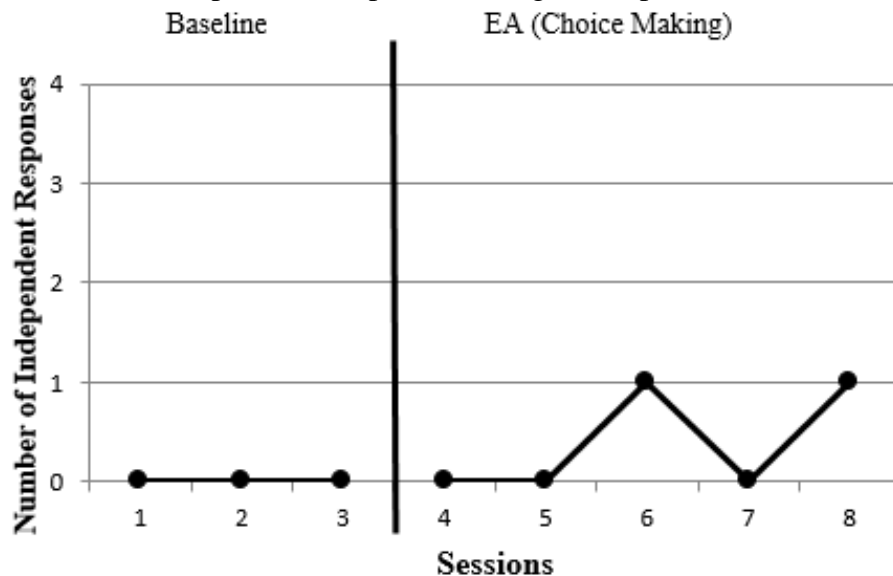
#### 1.2.5 Implementation of Procedures

When implementing EA strategies, it is important for the teacher to plan consequences for when the student engages in the desired communicative act and to prompt the communication response when it does not occur after the EA has been used. If a student uses communication spontaneously, the student should be immediately reinforced with specific verbal praise, highly preferred items or activities, or social reinforcement such as “That is funny,” following a comment or communication attempt by the student. The teacher should also expand the student’s communication by using responsive interaction. During implementation of EA strategies, the teacher should have reinforcers easily accessible if the student is reinforced by tangibles more than verbal reinforcement.

*Every morning, Mr. Rivera conducts morning meeting with his class. Morning meeting activities include each student signing in for the day, calendar time, and reviewing visual schedules for the day. For morning meeting, Mr. Rivera has a seating arrangement that remains the same most days, and includes adapted seating. He assigns peer buddies to each student. Mr. Rivera also chooses the reinforcers to help keep Kamari engaged throughout the activity. As mentioned before, one of Kamari’s communication objectives is to make choices when given choices using graphic symbols*

with words by touching or looking at the picture for 3 seconds. Mr. Rivera noticed that he is not providing Kamari opportunities to make choices during morning meeting by having the same seating arrangement daily, assigning the peer that he will work with, and choosing the reinforcers for him. Mr. Rivera began presenting 2 graphic symbols to Kamari each morning during morning meeting to provide an opportunities for him to make a choice. Each day, Mr. Rivera presented different options for his preference of seating, a peer buddy, and reinforcers. After 2 weeks of implementing this new EA (choice making), Kamari has made limited progress in making a choice independently. Figure 2 shows a graph of the data that Mr. Rivera collected during the next two weeks of implementation.

**Figure 2.** Number of Independent Responses during EA implementation.



#### 1.2.6 Environmental Arrangement Strategies + Systematic Teaching

If the child does not engage in the desired behavior during implementation, the teacher should add prompting strategies to teach the student the behavior that is desired in addition to using EA strategies to set the stage for social communication and engagement.

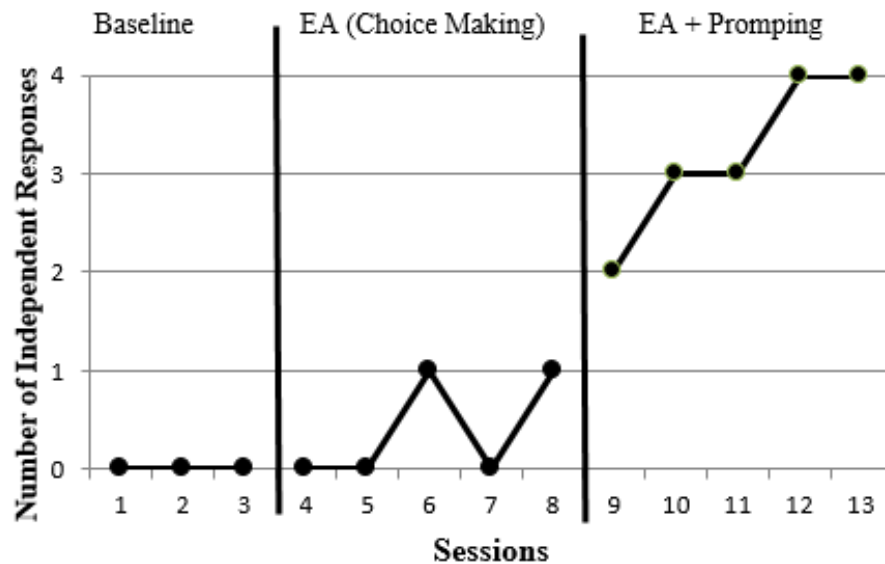
Some of those strategies include system of least prompts, most to least prompting, milieu teaching, naturalistic language interventions, shaping and modeling, progressive time delay, and aided language modeling. Using systematic teaching in addition to EA strategies will evoke the communication response. Prompts can be faded as the student begins to increase independence in the communication target. It is imperative that teachers know what to do next when there is not a significant change in the communication target. To measure progress, the teacher should collect and plot data on a line graph. If the child is not making progress on communication targets with the use of EA strategies alone, additional prompting procedures may need to be used with the EA strategies. Prompting strategies may need to be used in combination with EA strategies to teach specific, discrete communication skills. Ledford et al., (2019) discussed that EA strategies are essential but not enough to be used alone when teaching a child new behaviors that are desirable. Often, students engage in non-target or undesirable behaviors because that behavior may lead to a faster reinforcer or consequence than if the student engages in a more appropriate behavior. For example, a student's target might be to request items or activities using a one-word utterance with a speech-generated device. The student is able to aggressively push a peer toward the item to communicate the request and the peer may provide the item much faster than if the student used his augmentative and alternative communication (AAC) device to request the item using one-word. Sometimes students may not necessarily use undesired behaviors to communicate, but they will not communicate at all. For example, during downtime in the hangout area, a student may isolate himself and choose not to interact with his peers. In both of these classroom scenarios, the classroom teacher will need to be systematic in

planning prompts and consequences in addition to EA strategies. In the first scenario, the teacher could provide systematic supports by training the peer to use prompting strategies to respond to the student's requesting an item by pushing versus using his AAC device. For example, the teacher could train the peer to say "Watch me" and demonstrate how to activate the AAC device to request an activity. The teacher must include systematic teaching and EA together before the student's target behaviors will improve. In the scenario where the student will not make a choice, the teacher could use most to least prompting in order to teach the communication response in addition to using visual supports, which is identified as an EA.

*After 2 weeks of implementing the EA (choice making) alone, Mr. Rivera implemented the EA paired with prompting. Mr. Rivera added prompting and modeling strategies in addition to choice making with Kamari when teaching him to communicate his choice of seating for morning meeting. Mr. Rivera trained a peer buddy to model choice making and how to prompt Kamari using system of least prompts to make a choice. After 2 weeks of using the EA paired with systematic teaching, the data indicates that Kamari has improved his ability to communicate to make a choice about what type of seating he prefers to sit in during morning meeting. Figure 3 shows a graph of the data Mr. Rivera collected for the next 2 weeks.*



**Figure 3.** Number of Independent Responses during EA paired with prompting.



#### 1.2.7 Planning for Generalization

Teachers should plan for generalization by including EA strategies across all parts of the student's environment and across communication partners. Teachers should plan for EA strategies to be implemented not only in the special education classroom, but also in general education classes, special area or related arts classes, the cafeteria, bathroom, etc. Teachers can also plan for EA strategies to be used by many communication partners including peer buddies and paraprofessionals. Teachers should train both peers and paraprofessionals in the use of EA strategies.

#### 1.2.8 Conclusion

Individuals with ASD and developmental delay may communicate in unconventional ways, but they do have the ability and desire to communicate with their peers and family members. Special education teachers should work with related service providers to identify communication objectives individualized for each student's needs. Once objectives are selected, the teacher can use a communication matrix to embed EA strategies throughout

the school day, which will increase the opportunities for students to communicate. When EA strategies do not increase desired social communication and engagement outcomes, the teacher can implement the EA strategies with systematic teaching. Data should be collected and analyzed during implementation. When special education teachers use EA strategies throughout their school day, their classrooms become communication-rich due to the strategic planning and implementation of use of EA strategies. Planning for the use of and implementing EA strategies in the classroom for students with extensive support needs is important because they increase the likelihood that students will communicate more spontaneously. When an individual is taught how to communicate, their quality of life is also improved.

### 1.3 Component 2: Online Training Module: Creating A Communication-Rich Classroom: Using Environmental Arrangement Strategies to Increase Social Communication

The second part of this project was to develop an online training module. The purpose of the module was for teachers and speech language pathologists to gain knowledge and experience planning to use EA strategies in the classroom setting. Teachers and speech therapists are able to attend the training at their own pace. They will learn about EA strategies and leave with a communication matrix of their own classroom of how they can increase social communication opportunities. The slides for the modules can be found in Appendix B as well as the link for the module.

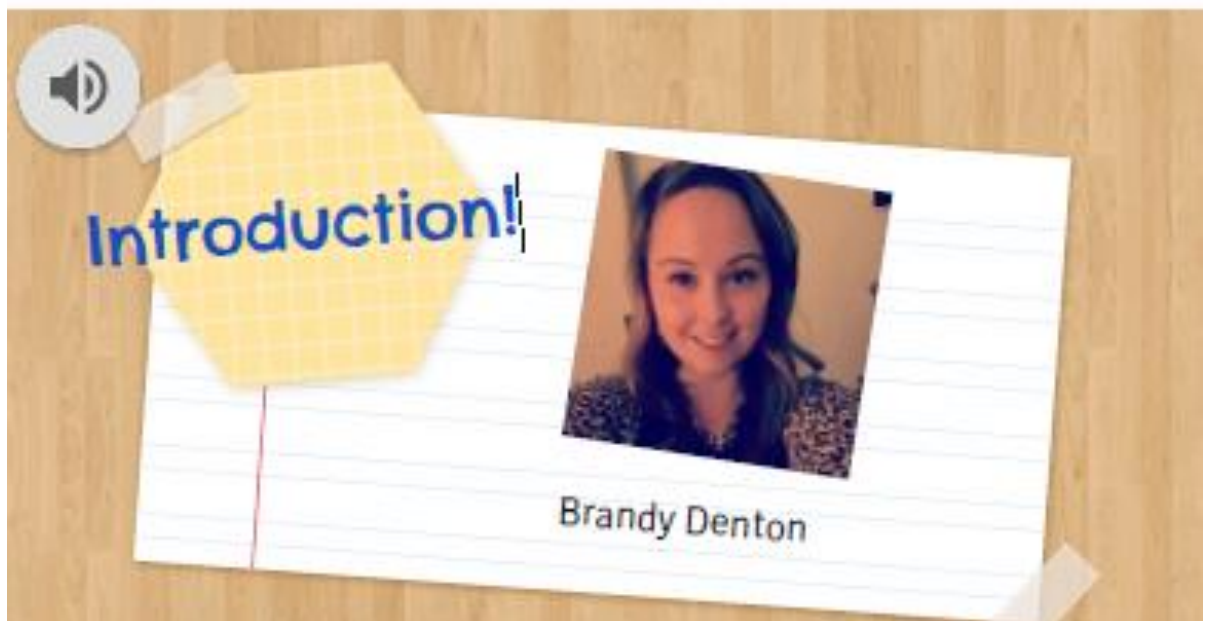
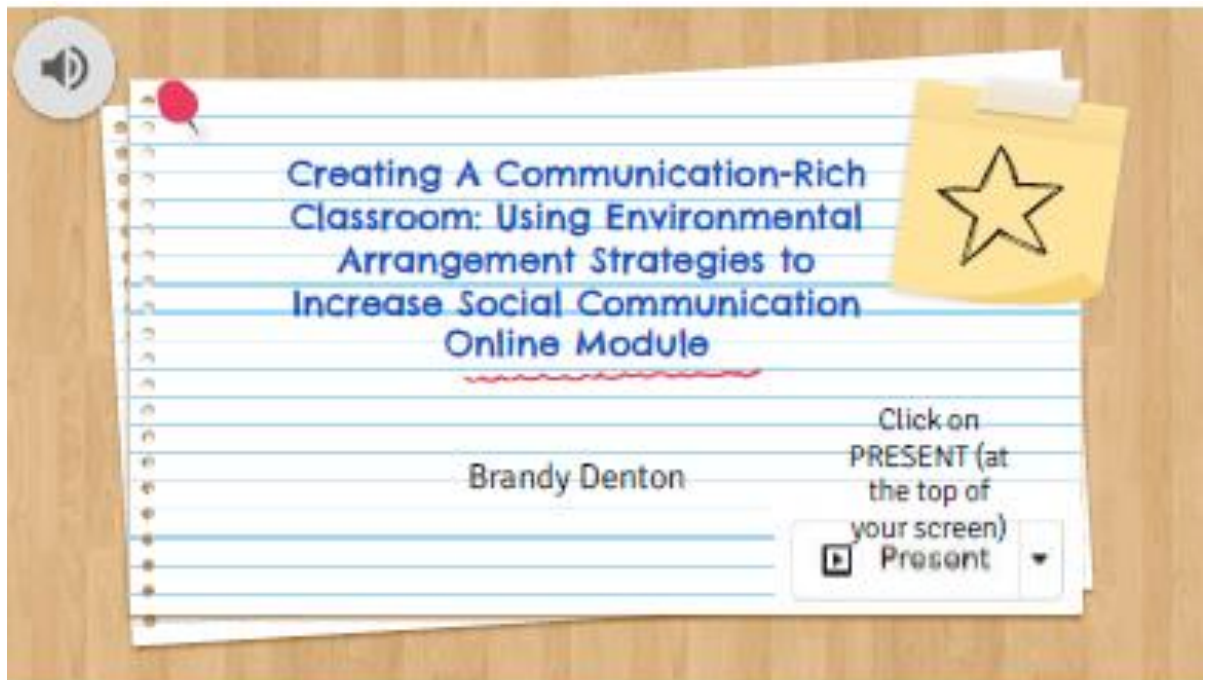
## APPENDICES


# APPENDIX A. COMMUNICATION MATRIX TEMPLATE

Schedule of classroom activities	Student's Communication Objectives				
	Target 1:	Target 2:	Target 3:	Target 4:	Target 5:

Kearns, J. , Kleinert, J. (2014). TAALC Communication Project. University of Kentucky


## APPENDIX B. ONLINE TRAINING MODULE








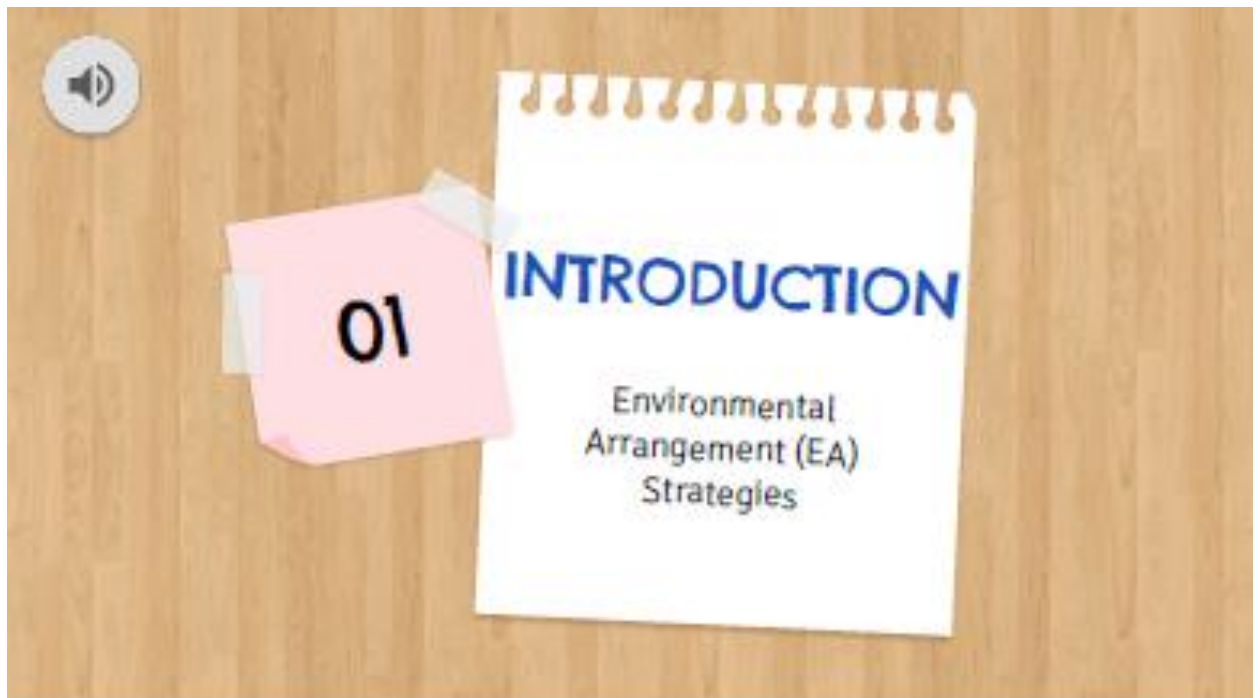
## Prior to this training:

- Read *Creating a Communication-Rich Classroom: Using Environmental Arrangement Strategies to Increase Social Communication*
- Gather the following materials
  - [Click here to print a blank communication matrix](#)
  - Writing utensils for notes
  - Highlighters




## TABLE OF CONTENTS

		
<b>INTRODUCTION</b> Overview of Environmental Arrangement (EA) Strategies	<b>EXAMPLES</b> <ul style="list-style-type: none"><li>• Model EA strategies</li><li>• Practice EA strategies</li></ul>	<b>CONCLUSION</b> <ul style="list-style-type: none"><li>• Feedback</li><li>• Questions</li></ul>










## Review of EA Strategies

Defined	Examples
Teachers can learn to arrange the environment across the day to increase opportunities for students to engage in social communication and engagement	<ul style="list-style-type: none"><li>• Arrange the physical environment</li><li>• Divide materials</li><li>• Sabotage environment</li><li>• Provide inadequate portions</li><li>• In view, out of reach</li></ul>



## EXAMPLES

Modeling EA strategies and planning for implementation







## EA Strategies in Action




Zimmerman, K.N., Ledford, J.R., & Chacin, K.T. (2016). Arranging materials. In *Evidence-based instructional practices for young children with autism and other disabilities*. Retrieved from <http://chip.vccsides.org/arranging-materials>



Did You See?






## Classroom Example: Elementary

**JOSIE**

Josie is a 2nd grade student. She has developmental delays. Josie's modes of communication include using a 2 cell switch, gestures, and facial expressions.



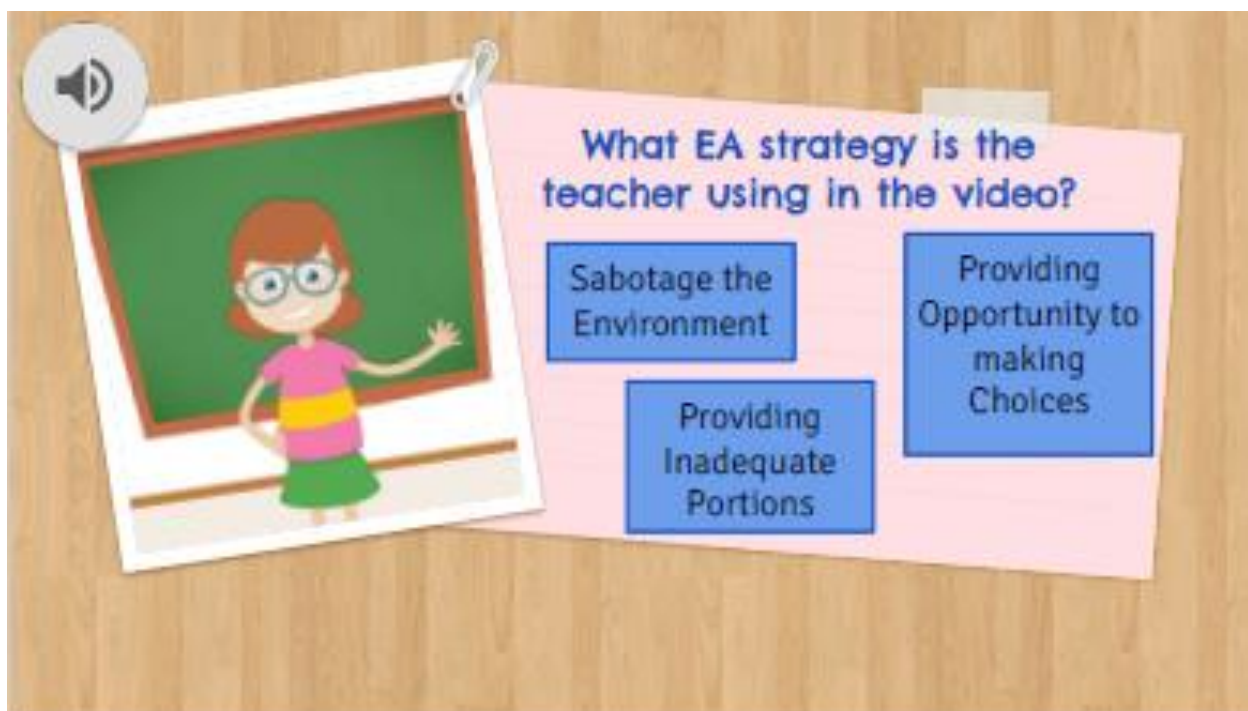
### Communication Strengths

- Greeting peers with smile
- Initiating communication with peers

### Communication Goals

- Requesting wants and needs
- Making choices from a field of 2

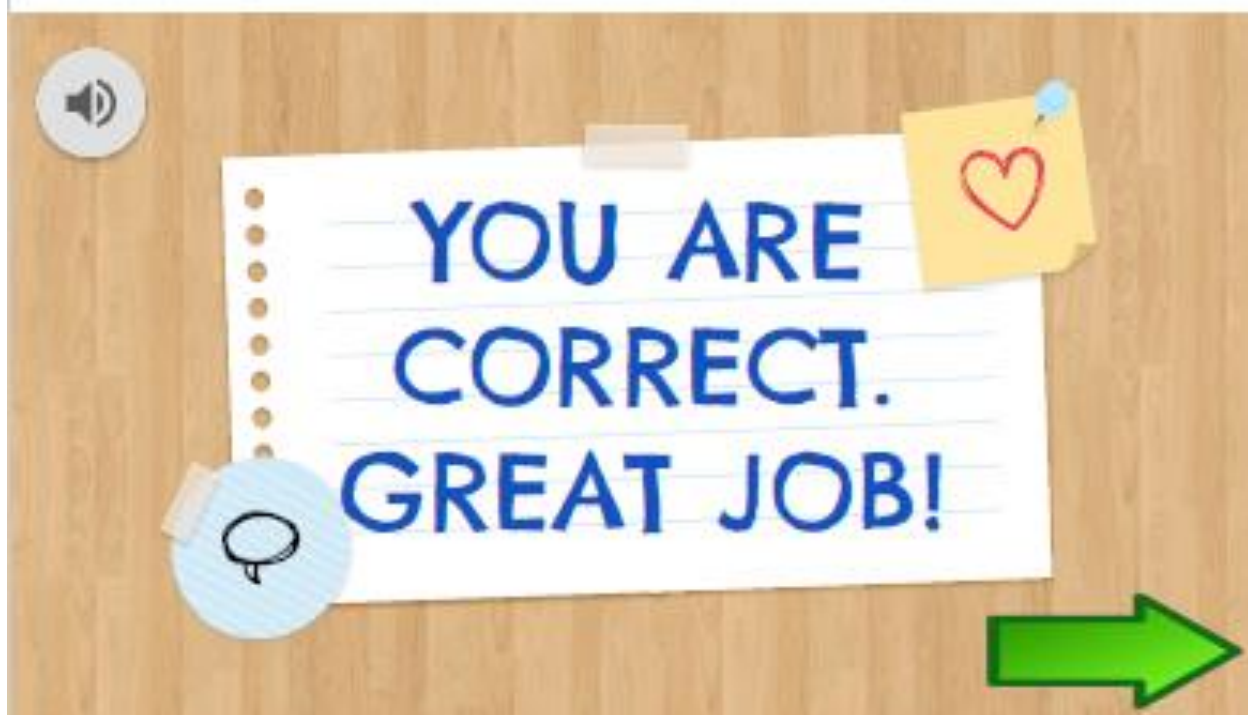




A wooden background with a photo of a teacher and a pink sticky note. The photo shows a female teacher with red hair and glasses, wearing a pink shirt and green skirt, standing next to a green chalkboard. The pink sticky note has the text "What EA strategy is the teacher using in the video?" and three blue boxes with options: "Sabotage the Environment", "Providing Inadequate Portions", and "Providing Opportunity to making Choices".

What EA strategy is the teacher using in the video?

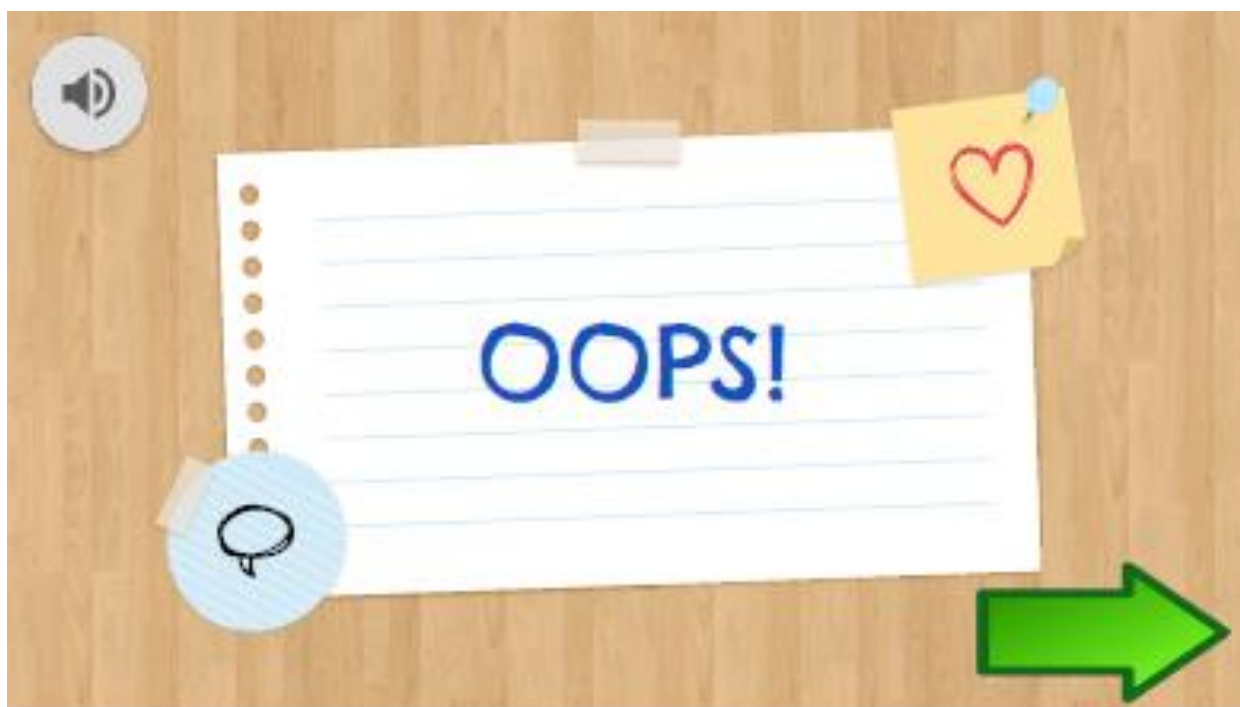
- Sabotage the Environment
- Providing Inadequate Portions
- Providing Opportunity to making Choices



A wooden background with a white sticky note and a green arrow. The white sticky note has the text "YOU ARE CORRECT. GREAT JOB!" and a yellow sticky note with a red heart. A green arrow points to the right.

YOU ARE CORRECT.  
GREAT JOB!







## Classroom Example: Secondary

### XAVIER

Xavier is a junior in high school. Xavier has autism spectrum disorder. Xavier's modes of communication include using graphic pictures with words, gestures, and a tablet with voice output.



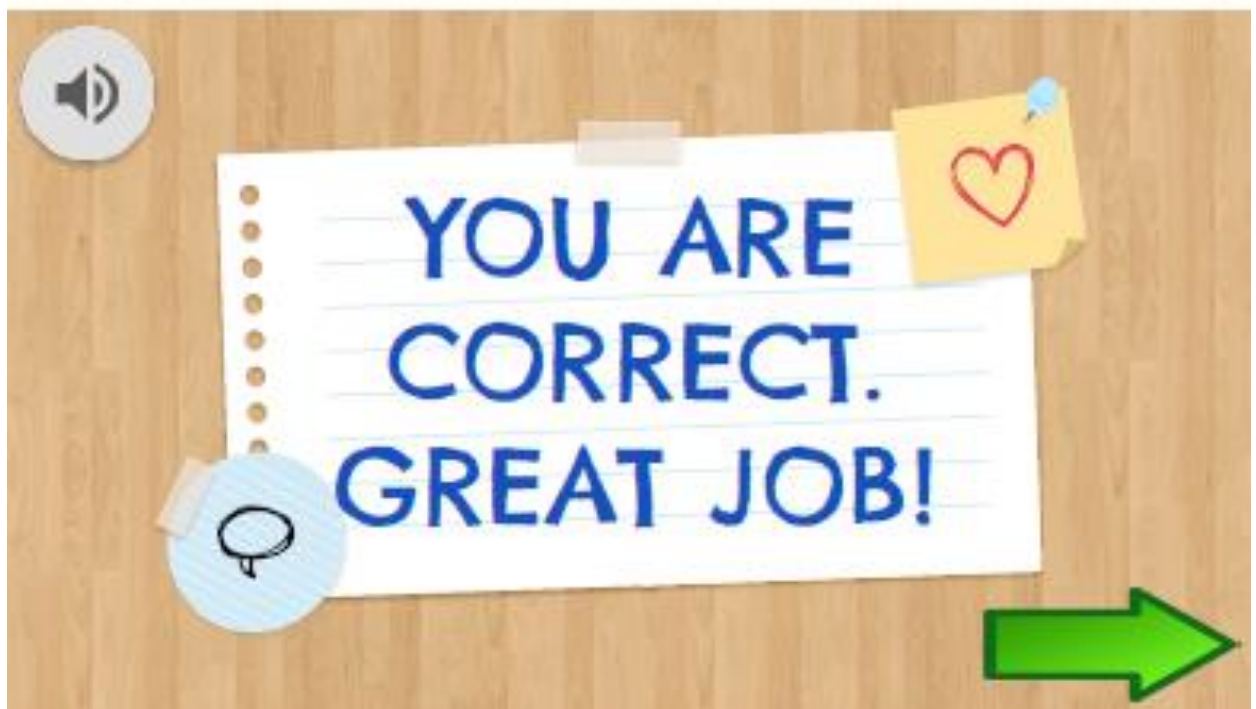
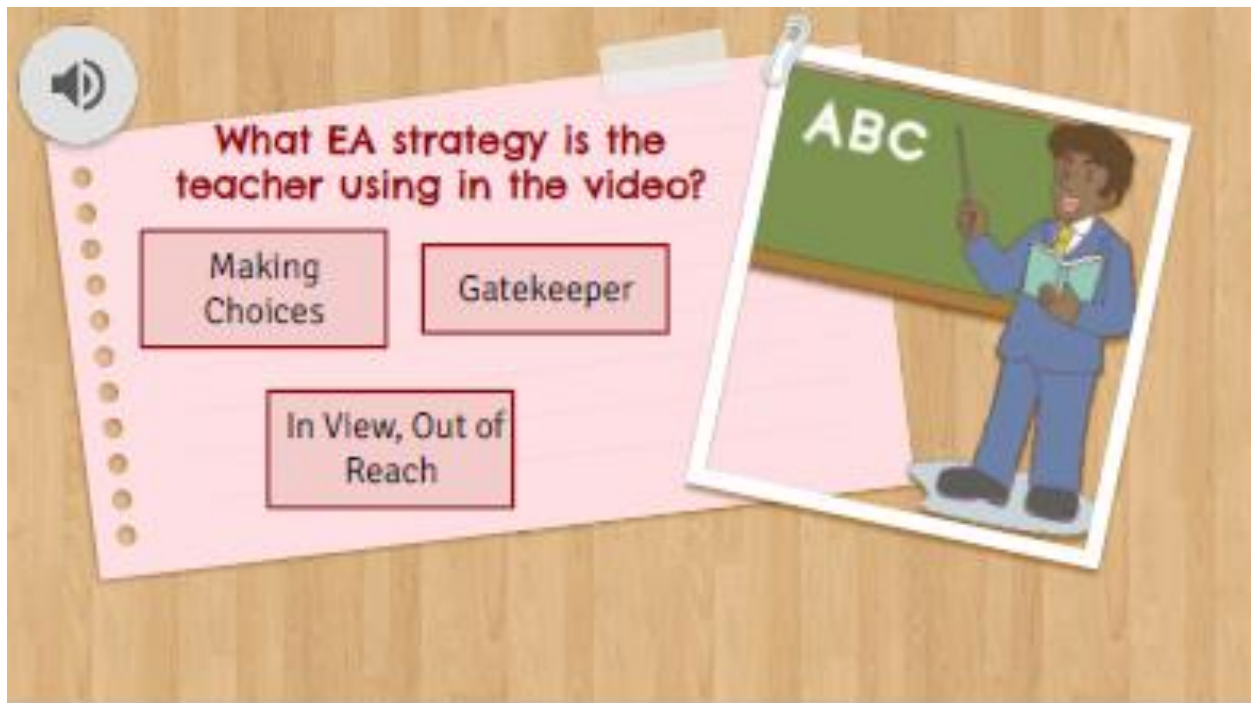
### Communication Strengths

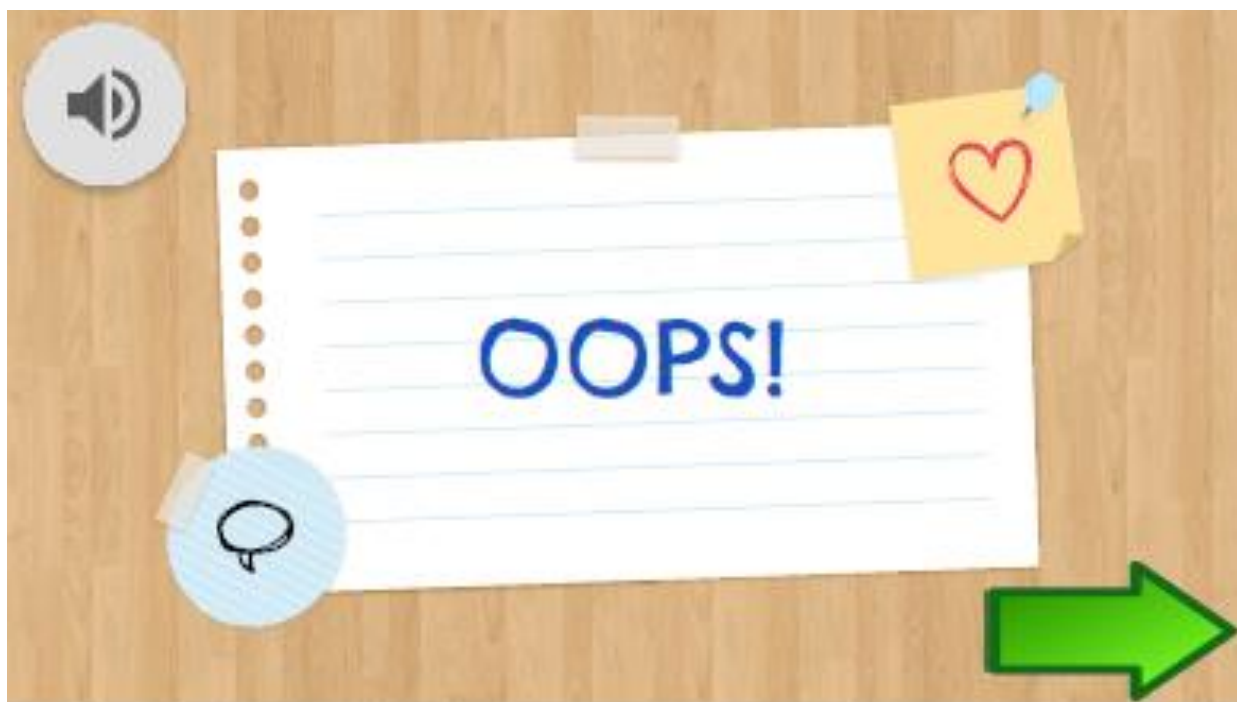
- greeting peers
- requesting highly preferred items
- making choices

### Communication Goals

- Increase mean length utterance (MLU) using his tablet with voice output
- Requesting items that he needs but that are not highly preferred











## Communication Matrix (Xavier)

Schedule of Classroom Activities	Student's Communication Targets	
	Request Device/System and EA	Increase MLU Device/System and EA
<i>Morning Calendar &amp; Current Events</i>		
<i>Lunch</i>		
<i>Math</i>		



## Communication Matrix (Xavier) cont.

Schedule of Classroom Activities	Student's Communication Targets	
	Request Device/System and EA	Increase MLU Device/System and EA
<i>Morning Calendar &amp; Current Events</i>	Xavier requests the graphic symbols that will be placed on the worksheet when answering questions about current events. Without the pictures, the task cannot be completed. He says "I want pictures."  (voice output device or gestures) EA: sabotage	
<i>Lunch</i>		
<i>Math</i>		



## Communication Matrix (Xavier) cont.



Schedule of Classroom Activities	Student's Communication Targets	
	Request Device/System and EA	Increase MLU Device/System and EA
Morning Calendar & Current Events	Xavier requests the graphic symbols that will be placed on the worksheet when answering questions about current events. Without the pictures, the task cannot be completed. He says "I want pictures." (voice output device or gestures) EA: sabotage	
Lunch		Xavier says "I want ____ (food item)" rather than "____ (food item)" to increase MLU (voice output device) EA: gatekeeper
Math		

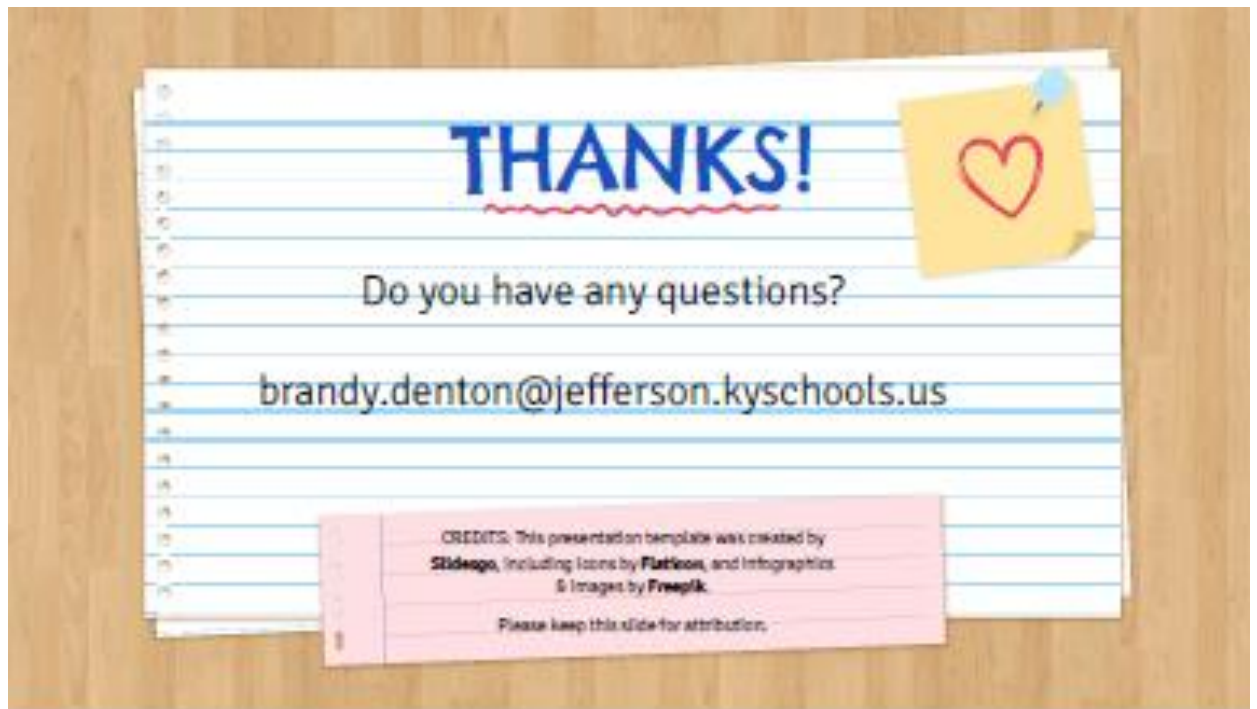
## Communication Matrix (Xavier) cont.



Schedule of Classroom Activities	Student's Communication Targets	
	Request Device/System and EA	Increase MLU Device/System and EA
Morning Calendar & Current Events	Xavier requests the graphic symbols that will be placed on the worksheet when answering questions about current events. Without the pictures, the task cannot be completed. He says "I want pictures." (voice output device or gestures) EA: sabotage	
Lunch		Xavier says "I want ____ (food item)" rather than "____ (food item)" to increase MLU (voice output device) EA: gatekeeper
Math	Xavier requests "more" manipulatives when he does not have enough to complete his multiplication problems (voice output device or gestures) EA: provide inadequate portions	







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*based instructional practices for young children with autism and other disabilities.* Retrieved from <http://ebip.vkcsites.org/environmental-arrangement>

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